AMENDMENTS TO THE CLAIMS:

Please amend claims 1-5 and add new Claims 6 and 7 as follows:

1. (Currently Amended)   A method for controlling an etching amount and an etching solution in spin etching, comprising:

(a) a first step of taking out one wafer from a loading cassette;

(b) a second step of measuring the weight W_1 of the wafer before etching;

(c) a third step of calculating an etching time T_0 with the following equation (1):

$$T_0 = V_0 \div R \cdots (1),$$

wherein T_0 is an etching time (min), V_0 is a target etching amount (g), R is an initial value R_0 (g/min) of an etching rate of a starting etching solution to be used, an etching rate R_1 (g/min) of the etching solution after etching or an etching rate R_2 (g/min) of the etching solution into which an additional etching solution has been ~~added~~ added.

(d) a fourth step of etching the wafer for the calculated time T_0;

(e) a fifth step of measuring weight W_2 of the wafer after etching;

(f) a sixth step of calculating an etching rate R_1 of the etching solution after etching with the following equation (2):

$$R_1 = (W_1 - W_2) \div T_0 \cdots (2),$$

wherein R_1 is an etching rate of an etching solution after etching, W_1 is weight (g) of a wafer before etching, W_2 is weight (g) of a wafer after etching and T_0 is an etching time.

(g) a seventh step of accommodating the etched wafer; and

(h) an eighth step of determining whether or not an etching rate R_1 of the etching solution after etching falls within an allowable range,

wherein when it is decided in the eighth step that an etching rate R_1 falls within the allowable range, the process from the first step to the seventh step is performed on a wafer to be processed in the next order, or when it is decided in the eighth step that an etching rate R_1 falls outside the allowable range, there is performed a ninth step of adding an additional etching solution into the etching solution to restore the etching rate R_1 to the etching rate R_2 in the vicinity of the initial value R_0, and thereafter the process from the first step to the seventh step is performed on a wafer to be processed in the next order.

2. (Original)   A method for controlling an etching amount and an etching solution in spin etching, comprising:

(a) a first step of taking out one wafer from a loading cassette;

(b) a second step of measuring the weight W_1 of the wafer before etching;

(c) a third step of determining an etching amount V with the following equation (3):

$$V = W_1 - W_0 \cdots (3),$$

wherein V indicates an etching amount (g), W_1 is weight (g) of a wafer before etching, and W_0 is weight of a finished wafer, that is a target weight (g) of a wafer after etching;

(d) a fourth step of calculating an etching time T with the following equation (4):

$$T = V \div R \cdots (4),$$

wherein T is an etching time (min), V is a target etching amount (g), R is an initial value R_0 (g/min) of an etching rate of a starting etching solution, an etching rate R_1

(g/min) of the etching solution after etching or an etching rate R_2 (g/min) of the etching

solution into which an additional etching solution has been added;

(e) a fifth step of etching the wafer;

(f) a six step of measuring weight W_2 of the wafer after etching;

(g) a seventh step of calculating an etching rate R_1 of the etching solution after

etching with the following equation (5):

$$R_1 = (W_1 - W_2) \div T \quad \cdots(5),$$

wherein R_1 is an etching rate (g/min) of the etching solution after etching, W_1 is

weight (g) of a wafer before etching, W_2 is weight (g) of a wafer after etching and T is an

etching time,

(h) an eighth step of accommodating the etched wafer; and

(i) a ninth step of determining whether or not an etching rate R_1 of the etching

solution after etching falls within an allowable range;

wherein when it is decided in the ninth step that an etching rate R_1 falls within

the allowable range, the process from the first step to the seventh step is performed on

a wafer to be processed in the next order, or when it is decided in the ninth step that an

etching rate R_1 falls outside the allowable range, there is performed a tenth step of

adding an additional etching solution into the etching solution to restore the etching rate

R_1 to the etching rate R_2 in the vicinity of the initial value R_0, and thereafter the process

from the first step to the eighth step is performed on a wafer to be processed in the next

order.

3. (Currently Amended)   The method according to ~~claim 1 or 2~~ claim 1, wherein

confirmation treatment is performed for the initial value R_0 of the etching rate of the

starting etching solution and/or the etching rate R_2 of the etching solution which has

been restored to a value in the vicinity of the initial value by adding an additional etching

solution into the used etching solution.

4. (Original)   The method according to claim 3, wherein the confirmation treatment for

the etching rate comprises:

    (a) a first step of taking out one wafer from a dummy wafer holding table;

    (b) a second step of measuring weight D_1 of the dummy wafer before etching;

    (c) a third step of etching the dummy wafer for a given time t_0 ;

    (d) a fourth step of measuring weight D_2 of the dummy wafer after etching;

    (e) a fifth step of calculating an etching rate r_0 of the etching solution after

etching with the following equation (6):

    $r_0 = (D_1 - D_2) \div t_0$ $\cdots$(6),

    wherein r_0 is an etching rate (g/min) of the etching solution after etching, D_1 is

weight (g) of the dummy wafer before etching, D_2 is weight (g) of the dummy wafer after

etching, and t_0 is an etching time;

    (g) a seventh step of transferring the etched dummy wafer to the dummy wafer

holding table; and

    (h) an eighth step of determining whether or not weight of the etched dummy

wafer falls within a defined range;

wherein when it is decided in the eighth step that weight of the dummy wafer falls within the defined range, the confirmation treatment for the etching rate is terminated, or when it is decided in the eighth step that the weight of the dummy wafer falls outside the defined range, there is performed a ninth step of generating an exchange request signal for the used dummy wafer, and thereafter the confirmation treatment for the etching rate is terminated.

5. (Original) A spin etching apparatus comprising: a spin etching section for etching a wafer; an etching solution circulating tank for storing and circulating the etching solution; an etching solution feed line for feeding the etching solution from the etching solution circulating tank to the spin etching section; an etching solution recovering line for recovering the etching solution used in the spin etching section into the etching solution circulating tank; a weight measuring section for measuring weight before and after etching of the wafer etched in the spin etching section; and a handling mechanism section in which the wafer to be etched is transferred to the weight measuring section, and after the weight of the wafer is measured, the wafer is transferred to the spin etching section, the etched wafer is transferred to the weight measuring section from the spin etching section, and after the weight of the etched wafer is measured, the wafer is taken out from the weight measuring section.

6. (New)   The method according to claim 2, wherein confirmation treatment is performed for the initial value R_0 of the etching rate of the starting etching solution and/or the etching rate R_2 of the etching solution which has been restored to a value in

the vicinity of the initial value by adding an additional etching solution into the used etching solution.

7. (New)   The method according to claim 6, wherein the confirmation treatment for the etching rate comprises:

(a) a first step of taking out one wafer from a dummy wafer holding table;

(b) a second step of measuring weight D_1 of the dummy wafer before etching;

(c) a third step of etching the dummy wafer for a given time t_0 ;

(d) a fourth step of measuring weight D_2 of the dummy wafer after etching;

(e) a fifth step of calculating an etching rate r_0 of the etching solution after etching with the following equation (6):

$$r_0 = (D_1 - D_2) \div t_0 \quad \cdots (6),$$

wherein r_0 is an etching rate (g/min) of the etching solution after etching, D_1 is weight (g) of the dummy wafer before etching, D_2 is weight (g) of the dummy wafer after etching, and t_0 is an etching time;

(g) a seventh step of transferring the etched dummy wafer to the dummy wafer holding table; and

(h) an eighth step of determining whether or not weight of the etched dummy wafer falls within a defined range;

wherein when it is decided in the eighth step that weight of the dummy wafer falls within the defined range, the confirmation treatment for the etching rate is terminated, or when it is decided in the eighth step that the weight of the dummy wafer falls outside the defined range, there is performed a ninth step of generating an exchange request signal

for the used dummy wafer, and thereafter the confirmation treatment for the etching rate

is terminated.